

Revisonal Notes on Described Australian Robber Flies of the Genus *Ommatius* (Asilidae).

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(Eight Text-figures.)

THE illustrations of the genitalia given here are restricted to the lateral view of the upper and lower forceps and, when showing, the ventral plate. The lamellæ are sometimes hidden when viewed from this aspect, but invariably they are situated just below the dorsal process of the upper forceps when that structure is present, and it may be so found on the last four species described below. Care must be taken not to confuse the lamellæ with the outline of the parts illustrated when comparisons are being made. The shape of the genitalia, as exhibited by the eight species here given, exceeds in variety that of any other Australian genus I am acquainted with; there are up to five distinctive types, which suggests that the genus is a complex one, but the female ovipositor of all the species appears to conform to but one type that is not dissimilar to that of *Neoaratus*.

It would seem that White confused species to a certain extent, and so, when his material is re-examined, it may be possible to modify the synonymic references given here. The adjustments seem to be necessary under *O. dimidiatus* and *O. lema*, for the former is a very consistent form that White seems to have regarded as a variety of the latter, which itself is a species that varies in colour. Again, a variation of *O. lema* was described by him as a distinct species. The synonymy regarding the other species seems to be clear enough, except perhaps that of *O. vitticrus*, which, as known to me, may ultimately prove to be a complex of two very closely related species.

In the Gibbons collection, now in the Australian Museum, Sydney, there are four named species of *Ommatius*: *O. distinctus* Ricardo, a paratype, *O. angustiventris*, and two others under manuscript names. one being a specimen of *O. dimidiatus* Macq., the other I did not identify at time examined, but is I think *O. lema* Walker; it bears the number 8 on the pin.

Key to the species of the genus Ommatius.

1. Genitalia of the male with the upper forceps simple 2.
Genitalia with one or more processes on the upper forceps 4.
2. Upper forceps short and simple, the lower forceps much longer and with
a process on lower edge *chinensis* Ricardo.
Upper forceps much longer than the lower ones, lower forceps simple 3.
3. Femora entirely black *angustiventris* Macq.
Femora only partly black *vitticrus* Big.
4. Upper forceps produced into a slender process that is broadened out,
spatulate form, at the apex *dimidiatus* Macq.
Upper forceps with from one to three processes 5.
5. Upper forceps with one or two processes 6.
Upper forceps with three processes 7.
6. Moustache entirely white. One process issuing from the upper corner
of the forceps *queenslandi* Ric.
Moustache with at least some black hairs. The longer of two processes
issues from the lower corner of forceps *pilosus* White.
7. Upper process of upper forceps very slender and somewhat lamella-like.
Intermediate process projecting well beyond the others. Lowest
process somewhat spatulate *lema* Walker.
All three processes subequal in length *distinctus* Ricardo.

OMMATIUS CHINENSIS Fab. (?). (Fig. 1.)

Ricardo 1913, p. 163.

Ommatius chinensis Fab. is an extra-limital form, and its identity with the one referred to by Miss Ricardo is not certain. Ricardo recorded it from Queensland, but she gave a very generalised description, and subsequently in Australian collections the name was wrongly attributed to *O. vitticrus* Bigot. There are two specimens before me that would appear to be that species described by Ricardo under the name, one a female captured in Brisbane (November 1922), the other a male bred by G. Bates, Bundaberg (14-11-27), and sent for identification by Mr. R. W. Mungomery, who subsequently donated it to the Queensland Museum.

The genitalia of the male on this species is so extraordinarily complicated that I have had difficulty in reducing its components to simple terms. The upper forceps are two simple plates, rather well defined, but overlying the larger and more laterally placed lower forceps. Ventrally, from near the base of these lower forceps, there arises a slender process that ends in a hook-shaped apex, and that is seen to cover what can only be regarded as the lower edge of the modified clasper. The ventral plate is represented by a pair of horizontal and contiguous processes, slender, hairy, and somewhat palp-like.

OMMATIUS ANGUSTIVENTRIS Macquart. (Fig. 2.)

Macquart 1849, p. 89; Schiner 1867, p. 410; Ricardo 1913, p. 163.
O. coroebus Walker 1849, p. 472; and 1855, p. 759.

The synonymy was given by Ricardo. This common form is in nearly every collection, correctly identified. It is a black species with tibiae and markings on the thorax bright yellow. New South Wales is the only State in which it is known to occur.

OMMATIUS VITTICRUS Bigot. (Fig. 3.)

Bigot 1876, p. lxxxv.; Ricardo 1913, p. 164. *O. mackayi* Ricardo 1913, p. 165.

I think the above synonymy will prove correct. This form seems to be the common one of Southern Queensland, to which area it may be confined. Though quite distinctive in general colouration and appearance, very old specimens may be confused with *angustiventris*, but the leg colouration will distinguish it. All the legs have a black stripe on the otherwise yellow femora, or the hind femora may be black only at the apex. The specimen with the latter colour also has the abdomen entirely yellowish and the moustache entirely white, but it does not exhibit any marked difference in genitalia.

OMMATIUS DIMIDIATUS Macquart. (Fig. 4.)

Macquart 1849, p. 90; Ricardo 1913, p. 164; White 1916, p. 168.

It appears that this species occurs throughout the settled coastal area of Queensland, and extends into New South Wales at least as far as Sydney. White's reference appears to be a complex, for he refers to a form on which the black is "on the posterior pair sometimes reduced to an elongate spot"; this character of the femora is consistent in my long series, so it is possible that White had a small *O. lema* amongst his series of four specimens. Macquart described it from Tasmania in the fourth supplement, but the locality is erroneous. Ricardo referred to it from North Queensland as "probably nearly allied" to *dimidiatus*, but there can be little doubt concerning its identity.

OMMATIUS QUEENSLANDI Ricardo. (Fig. 5.)

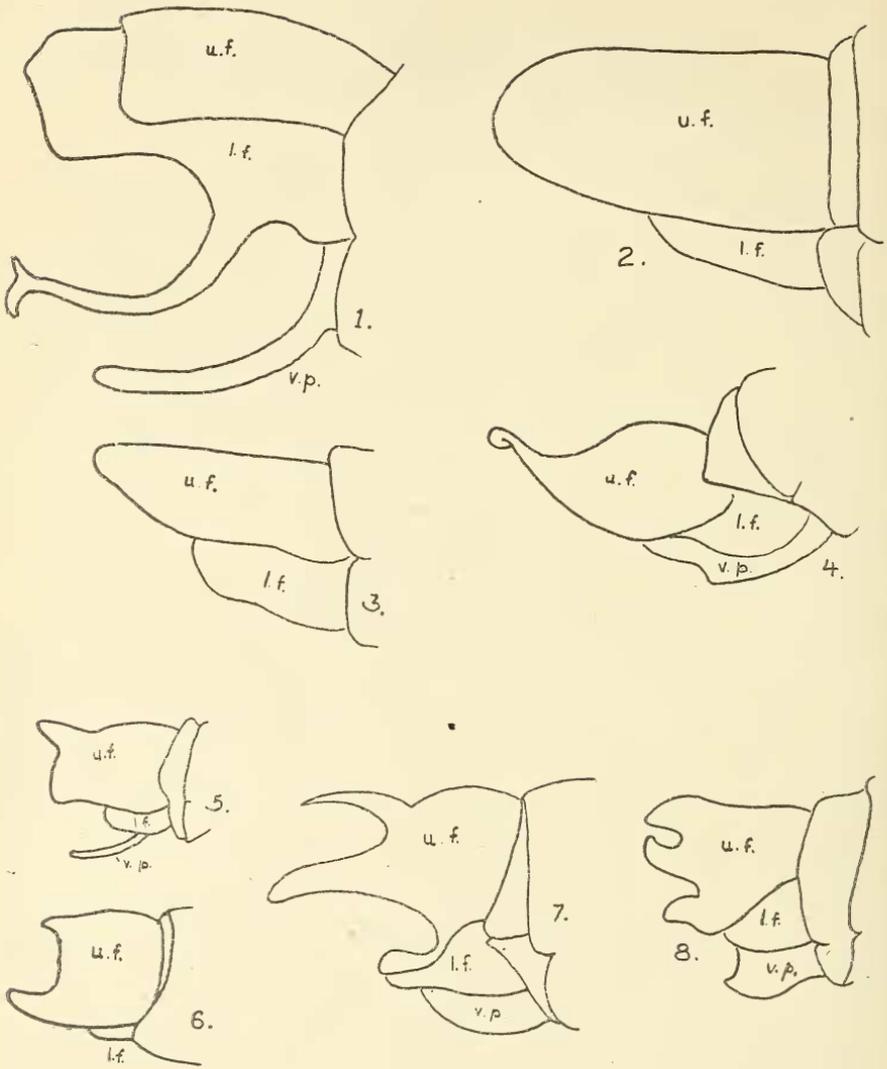
Ricardo 1913, p. 166.

A small black form that may be readily confused with one or other of the smaller species. Besides in the male genitalic characters, it may be recognised by the entirely white moustache of both sexes. The process on the upper forceps is somewhat small, and situated on the upper corner of the apical border; the apical edge of these forceps is bent inwards and has one, if not two, dentations along that edge, but these cannot be regarded as processes. There is only one pair before me (27th and 25th December, 1920), both from Brisbane.

OMMATIUS PILOSUS White. (Fig. 6.)

White 1916, p. 169; Hardy 1920, p. 186. *O. levis* White 1916, p. 170.

This synonymy was previously recorded by me. I have a sketch of the genitalia taken from the type of *O. pilosus*, and this conforms to



EXPLANATION OF FIGURES.

Male genitalia of—

- Fig. 1.—*Ommatius chinensis* Ricardo.
 Fig. 2.—*Ommatius angustiventris* Macquart.
 Fig. 3.—*Ommatius vitticus* Bigot.
 Fig. 4.—*Ommatius dimidiatus* Macquart.
 Fig. 5.—*Ommatius queenslandi* Ricardo.
 Fig. 6.—*Ommatius pilosus* White.
 Fig. 7.—*Ommatius lema* Walker.
 Fig. 8.—*Ommatius distinctus* Ricardo.

l.f., Lower forceps; *u.f.*, upper forceps; *v.p.*, ventral plate.

that given here; the genitalia of specimens conforming to the description of the typical *O. levis* are identical. The species is as yet known only from Tasmania, but White added South Australia to its range, probably erroneously.

OMMATIUS LEMA Walker. (Fig. 7.)

Walker 1849, p. 472; and 1855, p. 759; Ricardo 1913, p. 164. *O. obscurus* White 1917, p. 89.

This synonymy is tentatively suggested, as I have not seen a specimen that fits White's description in every respect. The femora may be entirely black (*obscurus*) or the underside may be brown or red (*lema*); White may have included the latter as his *dimidiatus*. The red colour, when present, on the otherwise black femora is perhaps the one character that most readily distinguished the female from other species. Also the outer side of the tibiæ is much lighter than the other parts of this segment, which again aids in the determination of the female, but the character is not confined to the species. In describing *O. obscurus*, White referred to the tibiæ as being "brown at the knees"; I have not seen this restriction, but he also states that the costal margin is tinged with brown, especially at the tip, which wing character applies only to the present form.

All my specimens are from Brisbane, where it occurs somewhat abundantly from October to January resting on twigs; previously it was only known from New South Wales. This species can scarcely be the *dimidiatus* of Macquart, despite the fact Macquart states "legs red, femora above and tibiæ below black" (Ricardo's translation), for he gives the dimensions as only 4 lines (about 8 mm.), and states "Ailes claires."

OMMATIUS DISTINCTUS Ricardo. (Fig. 8.)

Ricardo 1918, p. 66.

This species, hitherto only known from Queensland, is also represented from Darwin, Northern Territory, by one male. The form is readily recognised by the fuscous spot situated at the apex of the wing, but on the female the spot tends to disappear.

LIST OF WORKS REFERRED TO.

- MACQUART, 1849.—Dipteres Exotique nouveaux ou peu connus. Supplement 4.
 WALKER, 1849 and 1855.—List of Dipterous Insects in the British Museum, ii.; and vii. suppl. 3.
 SCHINER, 1867.—Kaiserlich-Koenigliche Zoologisch-Botanische Gesellschaft. Verhandlungen, xvii.
 BIGOT, 1876.—Societe Entomologique de France (5), Bull. lxxxv.
 RICARDO, 1913 and 1918.—Annals and Magazine of Natural History (8) xi.; and (9) i.
 WHITE, 1916 and 1917.—Proceedings of the Royal Society of Tasmania for these years.
 HARDY, 1920.—Proceedings of the Linnean Society of New South Wales, xiv.